

Amendments to the Claims:

The following listing of claims will replace all prior versions and listings of claims in this application:

Listing of Claims:

Claim 1. (Currently amended) A diagnostic method for in vivo detection of cancerous cells of the oral epithelium by selective marking of the mitochondria thereof, comprising the steps of:

(a) contacting said oral epithelium containing cancerous cells in the locus of normal cells with a cationic supravital mitochondrial marking agent other than toluidine blue O and;

(b) detecting the retention of said agent by the mitochondria of cancer cells in vivo which have been marked by absorption of said agent in the mitochondria thereof.

Claim 2. (Previously presented) A method for selective killing of oral epithelial cancer cells in the locus of normal cells of the oral epithelium comprising the step of contacting said cancer cells with a cationic supravital mitochondrial marking agent other than toluidine blue O.

Claims 3-10. (Canceled)

Claim 11. (New) A composition for the selective killing of epithelial cancer cells, the composition comprising a cationic supravital mitochondrial marking agent other than toluidine blue O and a chemotherapeutic agent.

Claim 12. (New) The composition of Claim 11 wherein the cationic supravital mitochondrial marking agent is an oxazine dye.

Claim 13. (New) The composition of Claim 11 wherein the cationic supravital mitochondrial marking agent is a thiazine dye.

Claim 14. (New) The composition of Claim 11, wherein the cationic supravital mitochondrial marking agent is one or more dye compound(s) selected from the group consisting of: alcian blue, malachite green, phenosafranin, acriflavine, pyronin Y, toluylene blue and brilliant green.

Claim 15. (New) The composition of Claim 11, wherein the cationic supravital mitochondrial marking agent is one or more non-dye compound(s) selected from the group consisting of: peonidin, oxythiamine, tieonium iodine, elliptinium acetate and furazolum chloride.

Claim 16. (New) The composition of Claim 11 wherein the chemotherapeutic agent selectively kills cancer cells by a mechanism that is different from the mechanism by which the cationic supravital mitochondrial marking agent kills cancer cells.

Claim 17. (New) A composition for the selective killing of epithelial cancer cells, the composition comprising a reaction product of a cationic supravital mitochondrial marking agent other than toluidine blue O and a chemotherapeutic agent.

Claim 18. (New) A method for the improved selective killing of oral epithelial cancer cells comprising the step of contacting said cancer cells with the composition of Claim 11.

Claim 19. (New) A method for the improved selective killing of oral epithelial cancer cells comprising the step of contacting said cancer cells with the composition of Claim 17.

Claim 20. (New) A method for improving the selective killing of cancerous epithelial cells comprising the steps of:

(a) combining a cationic supravital mitochondrial marking agent other than toluidine blue O and a chemotherapeutic agent; and

(b) delivering the combined the cationic supravital mitochondrial marking agent other than toluidine blue O and a chemotherapeutic agent to cancerous epithelial cells.